

## WHAT IS CLAIMED IS:

- Sub a1
1. An ink jet printhead assembly, comprising:  
a heater chip including a backside with at least one cavity;  
a substrate associated with said backside of said heater chip; and  
adhesive at least partially disposed within said at least one cavity, said
  - 5 adhesive adhering said backside of said heater chip to said substrate.
  2. The printhead assembly of claim 1, wherein said at least one cavity comprises at least one trench.
  3. The printhead assembly of claim 2, wherein said heater chip includes at least one ink via.
  4. The printhead assembly of claim 3, wherein said at least one trench substantially surrounds each said via.
  5. The printhead assembly of claim 4, wherein said at least one via comprises a plurality of vias, said adhesive being configured for preventing fluid communication between said vias in an area defined between said heater chip and said substrate.
  6. The printhead assembly of claim 2, wherein said heater chip includes at least one outside edge, said at least one trench extending to said at least one outside edge to thereby form at least one vent.
  7. The printhead assembly of claim 6, wherein said at least one vent is configured for allowing said adhesive to outgas during curing.
  8. The printhead assembly of claim 1, wherein said adhesive is substantially entirely disposed within said at least one cavity. // nup
  9. A heater chip for use in an ink jet printhead, said heater chip including a backside configured for being adhered to a substrate, said backside including at least one cavity configured for receiving adhesive therein.
  10. The heater chip of claim 9, wherein said at least one cavity comprises at least one trench.
  11. The heater chip of claim 10, wherein said heater chip includes at least one ink via.
  12. The heater chip of claim 11, wherein said at least one trench substantially surrounds each said via.

Sub C1  
13. The heater chip of claim 10, wherein said heater chip includes at least one outside edge, said at least one trench extending to said at least one outside edge to thereby form at least one vent.

14. The heater chip of claim 13, wherein said at least one vent is configured for allowing said adhesive to outgas during curing.

Sub a3  
15. A method of assembling an ink jet printhead, said method comprising the steps of:

creating at least one cavity in a backside of a heater chip; and

adhering said backside of said heater chip to a substrate such that adhesive is

5 at least partially disposed within said at least one cavity.

Sub C1  
16. The method of claim 15, wherein said creating step includes micromachining said at least one cavity.

Sub a4  
17. The method of claim 15, wherein said creating step includes dicing said at least one cavity.

18. The method of claim 15, wherein said creating step includes laser ablation of said at least one cavity.

19. The method of claim 15, wherein said adhering step includes the substeps of:

dispensing said adhesive onto said substrate;

aligning said at least one cavity with said adhesive; and

5 pressing said heater chip and said substrate together.

20. The method of claim 15, wherein said at least one cavity comprises at least one trench.

Sub C1  
21. The method of claim 20, wherein said heater chip includes at least one outside edge, said at least one trench extending to said at least one outside edge to thereby form at least one vent, said method comprising the further step of allowing said adhesive to outgas through said at least one vent during curing.